

Amendments to the Drawings:

Figure 6B has been amended to include a reference no. 27 that identifies a recess formed in an end of the body part of the plug. A substitute sheet illustrating the amendment is attached after the Remarks section of this document.

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claims 6 and 12 have been amended to include the allowable subject matter of now canceled claims 18 and 22, respectively. Claim 9 has been amended to include the limitations of now canceled claims 20. Claims 15-17 have been amended. The amendments to claims 9 and 15-17 are supported by at least Figure 6B and the description at page 6, lines 9-16 of the present application. Claims 19, 21 and 23 have been amended to correct claim dependencies. Figure 6b and the specification have been amended to identify a recess formed in the body portion of the claimed plug. No new matter has been added.

Objections

Claim 15 has been amended to replace the term "cylindrical" with the term "circular." Withdrawal of the objection is respectfully requested.

§ 103 Rejections

Claims 6, 8, 12, and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Miller (US 2,110,024 or US 2,608,388) or Dawson (US 3,260,307) in view of Belleli (US 4,318,441). Applicant respectfully traverses this rejection. As noted above, claims 6 and 12 have been amended to include the allowable subject matter of claims 18 and 22, respectively. Therefore, claims 6 and 12, and the claims that depend from them, should be in condition for allowance. Applicant does not otherwise concede the correctness of this rejection.

Claims 9, 11, 20 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Miller (US 2,608,388) or Miller (US 2,110,024) in view of Kipp (US 4,452,070). Applicant respectfully traverses this rejection.

Miller '024 discloses a heat exchanger that uses sealing plugs 53 that are removeably inserted in bores of headers 41, 43. The plugs 53 are screw plugs that do not include a clamping member, a sealing member, or a support member.

Miller '388 discloses a heat exchanger with headers 1, 2 at opposing ends and threaded plug members 6 screwed into holes in the headers 1, 2. The plugs 6 do not include clamping members, sealing members, or support members.

Kipp discloses a plug 1 that fits within a tubing 2. The plug includes a rod 7 that extends there through to permit injection of high-pressure fluid through the plug. A separate plug 6 is attached to one end of the plug 1. A packing member 11 is mounted to an exterior of the plug 6 and is interposed between the plugs 1, 6 to provides a sealing function within the tubing 2. The packing member 11 is positioned on an exterior surface of the plug 6. The plug 1 does not include a recess on an exterior surface.

Miller '024, Miller '388 and Kipp fail to disclose or suggest a plug that includes a body part having "a recess formed in an outer surface thereof and a bore formed therein that extends along a portion of a length of the body part, and a clamping member, wherein . . . the sealing member is arranged in the recess between the body part and the clamping member," as required by claim 9. Therefore, claim 9 and the claims that depend from it are allowable in view of the cited references.

Claims 2, 4 and 15-17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Miller (US 2,608,388) or Miller (US 2,110,024) in view of Kipp and further in view of Dawson. Applicant respectfully traverses this rejection.

Miller '388, Miller '024, and Kipp fail to disclose or suggest "the plugs comprise a body part and a clamping member, wherein the body part includes a recess formed in an outer surface adjacent to an end of the body part and the clamping member is attached to the body part," as required by claim 15 for at least those reasons discussed above related to claim 9. Miller '388, Miller '024 fail to disclose or suggest a recess or a clamp. Kipp fails to disclose a recess in an outer surface of the plug 1. Miller '388, Miller '024 and Kipp all fail to disclose or suggest a sealing ring or a support member in a recess as required by claims 16 and 17, respectively.

Dawson fails to remedy the deficiencies of Miller '388, Miller '024, and Kipp as they relate to claim 15. Dawson also fails to disclose or suggest a recess in an outer surface of the plug (claim 15), a sealing ring arranged in the recess (claim 16), or a support member is arranged in the recess (claim 17). Therefore, Miller '388, Miller '024,

Kipp and Dawson fail to disclose or suggest every limitation of claim 15 and the claims that depend from it.

Claims 2, 4, 9, 11, 15-17, 20 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Dawson in view of Kipp. Applicant respectfully traverses this rejection.

Dawson and Kipp fail to disclose or suggest a plug having the recess limitations discussed above. Therefore, Applicant submits that Dawson and Kipp, alone or in combination, fail to disclose or suggest every limitation of claims 9 and 15 and the claims that depend from them.

Allowable Subject Matter

Applicant kindly thanks the Examiner for the indication of allowable subject matter in claims 18, 19, 22 and 23. As noted above, claims 6 and 12 have been amended to take the allowable subject matter of claims 18 and 22.


In view of the above, Applicant requests reconsideration of the application in the form of a Notice of Allowance. Any questions or concerns regarding this communication can be directed to the undersigned attorney at (612)371.5387.

Respectfully submitted,

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Dated: _____

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